

# AMPEX 2000 SERIES TAPE RECORDERS THE NEW STATUS OF STEREO





# AMPEX STEREO EASE

*simpler to play than a phonograph*

Now from Ampex, the name synonymous with quality, comes a revolutionary new concept in tape recorders... stereo ease. Imagine a tape recorder that can load itself in seconds, play unattended for hours and let you enjoy a complete 4 track stereo tape without reel changing or rewinding. This is the new Ampex 2000 series tape recorder... the tape recorder that gives you the long play convenience and tape saving economy of 3¾ ips recordings with little audible sacrifice in sound quality.

Never before has any recorder offered so many revolutionary features designed to make tape recording and listening an enjoyable experience for every member of the family. Truly, here is the most uncomplicated, carefree way to explore the wonderful worlds of sound. Here is stereo ease as never before...

**AUTOMATIC REVERSE**—Imagine enjoying a complete 4 track stereo or monophonic tape without switching reels. With the Ampex 2000 you play the entire length of your tape to completion, then watch as the recorder automatically changes direction and plays back in the opposite direction.

This is possible because the 2000 can add an inaudible electronic signal to your tape to "tell" the recorder when to

reverse direction. Thus, by adding the signal at both ends of the tape, your recorder will actually play a full 4 track tape to completion then re-cycle itself and continue playing. When playing 2400' reels of tape at 3¾ ips this self-reversing feature allows you to have up to 4 hours of uninterrupted, continuous music... there is also a manual control lever which allows you to reverse tape direction at any time you desire.

**2-SECOND AUTOMATIC THREADING**—A feature everyone will appreciate, if not really enjoy using. Simply place reel on the recorder, pull tape through head assembly and drop in the automatic take-up slot. Then put the recorder in play and sit back to enjoy the music. Loads faster than a phonograph, even quicker than tuning your radio. No take-up reel fussing. So easy a child can master it on his first try.

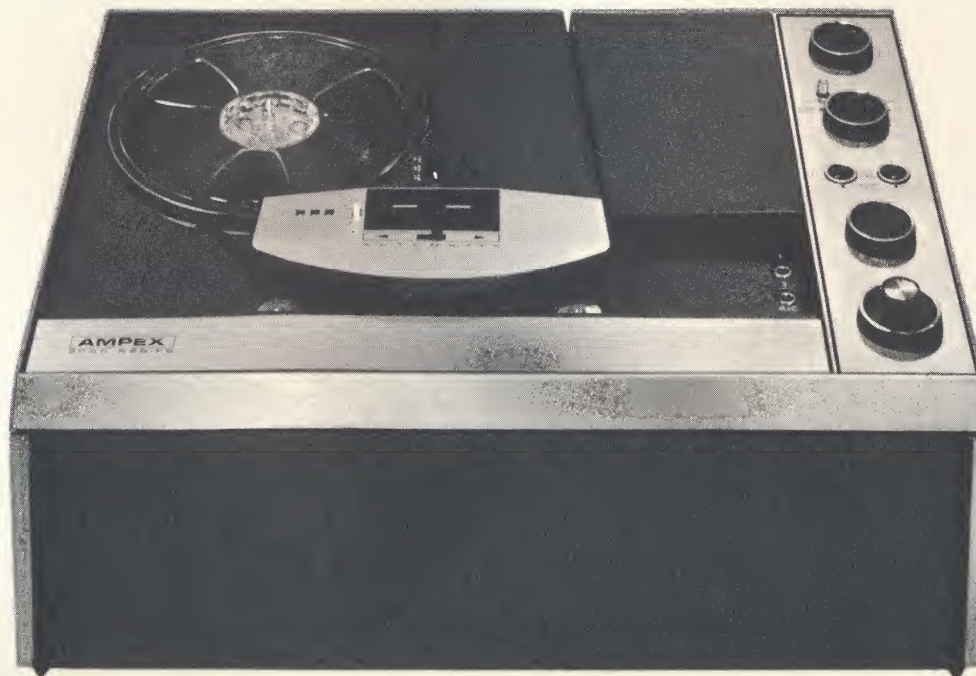
**ULTRA-EASY UNITIZED CONTROLS**—All controls are clearly labelled, conveniently grouped and easily accessible. The recorder is engineered to virtually eliminate the possibility of damage through operating errors. Unlike other tape recorders, you need no mechanical skill or knowhow to play and enjoy the Ampex 2000 to the fullest.

**AUTOMATIC SLUMBER SWITCH**—Sit back to enjoy the

music... should you fall asleep, the Ampex 2000 will automatically turn itself completely off... including speakers. This convenient feature allows you to leave the recorder during operation without worrying about returning when tape is finished.

**AUTOMATIC SLIDE PROJECTOR ACTUATOR (OPTIONAL)**—Provides perfectly synchronized narration to your own slide shows. For use with many popular models of remote control slide projectors. Simply add the inaudible signal, at any point on your tape where you wish your slide projector to advance, and the actuator does the rest. Here's the low-cost way to professional slide presentations.

**ADDITIONAL FEATURES**... Automatic tape lifters; convenient cord storage compartment; automatic digital counter; interlocked controls to eliminate tape stress and breakage; attractive snap-on dust cover; fold-down carrying handle; easily accessible mike inputs; "hidden" external input and output receptacles to eliminate unsightly tangled cords; friction-loaded volume controls for simultaneous adjustment of individual speakers; automatic speaker silencers to deaden built-in speakers when external speakers are used; and two-way muting switch for monitoring during record.





# AMPEX STEREO PERFORMANCE

*the wonderful difference in sound you can depend on hearing*

## PROFESSIONAL-QUALITY RECORD AND PLAYBACK HEADS

**(A)**—In any recorder the heads are the most important factor contributing to high performance. Their function is to create a magnetic field on tape (during record) or convert a magnetic field into electrical energy (playback). The recorder's performance can be no better than its heads. That's why the heads in the new Ampex 2000 series offer no compromises in performance and quality. They are without doubt the finest heads to be found on amateur or semi-professional equipment. Years of constant use will neither impair their efficiency nor lower the performance of your recorder.

**POSITIVE-ACTION, DUAL CAPSTAN DRIVE (B)**—Provides the most reliable tape drive system ever devised. In either direction of play, one capstan provides motion, while the other creates a slight holdback tension . . . pressure pads are eliminated. The combination of constant speed and precise tape tension assures uniform tape travel across the heads with ideal head to tape contact. Because tape runs independently of reel action, there is less tendency to jerk or vary speed as tape passes heads. One look at the superior wow and flutter specifications and professionals will recognize this as a superior drive system. With Ampex dual capstan performance, you can play and record tapes at  $3\frac{3}{4}$  ips, with a fidelity heretofore possible only at greater speeds. You'll use less tape, save on tape costs, and obtain longer uninterrupted programs.

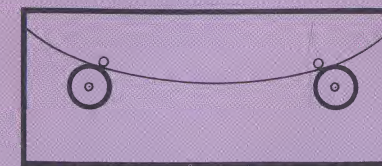
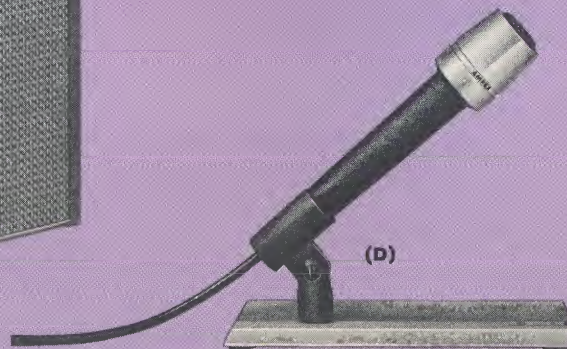
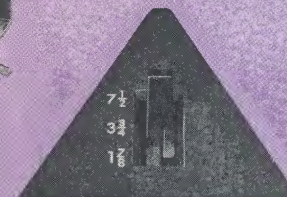
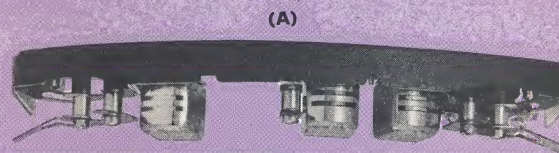
**HIGH-EFFICIENCY, CUSTOM-DESIGNED AMPLIFIERS**—For maximum reliability, low noise level, and optimum performance, pre-amplifiers are shock mounted. They are virtually isolated from external vibrations and provide an undistorted flow of signal power to the amplifiers. In the Model 2070, power amplifiers are solid state for longer life and cooler operation . . . frequency limiting output transformers have been eliminated. In all models, the power supply is also solid state for higher efficiency and longer life.

**VERSATILE 3-SPEED OPERATION (C)**—Whatever your recording requirements and listening pleasure you can select the optimum speed. Where truest fidelity is of prime importance,  $7\frac{1}{2}$  ips (inches per second) recording is recommended. For mood music and hours of uninterrupted high fidelity listening select  $3\frac{3}{4}$  ips. And, for voice recording, where high fidelity is not of prime importance, select  $1\frac{1}{2}$  ips for up to 17 hours of continuous monophonic recording.

**BUILT-IN SPEAKERS**—Though most recordists will want external speakers for full dramatic stereo effects, the Ampex model 2070 is complete with 2 built-in, full-range speakers (one per channel). With this unit you have a completely self-contained tape recorder for recording and playing virtually anywhere 117 volt current is available. Additionally, built-in speakers are ideal for monitoring during record.

**AMPEX MICROPHONE NO. 2001 (D)**—The new Ampex microphone is a high impedance omnidirectional dynamic microphone for recording. Optimum frequency response is provided in the critical range from 50 to 15,000 cps. The microphone has been styled for a slim, tapered appearance, is light in weight and comfortably balanced for hand-held use. Attractive matching brushed aluminum base available.

**MATCHING SPEAKER SYSTEM (OPTIONAL)**—Ampex 2000 series speakers are specifically designed to be used with Ampex 2000 series tape recorders and to enhance their performance. Each 2000 speaker enclosure contains an 8" extended range speaker and a 3" tweeter speaker with an Ampex engineered 2000 cps crossover network for optimum speaker efficiency. Speakers are baffled and vented in a unique fibre glass filled cabinet. On the back of each enclosure is a high frequency attenuator switch which compensates for the varying acoustical characteristics encountered in different surroundings. The switch can be positioned to suit your listening preference. Speakers come complete with 15' cord and jack ready to plug into the back of the 2000 series recorder. **(E)** Model 2010 has charcoal grille cloth; model 2011 has cane. **(F)** Lower cost, yet high-quality 1000 Series speaker systems also available.



(C)

(D)

(B)



# AMPEX TRADITIONAL CRAFTSMANSHIP

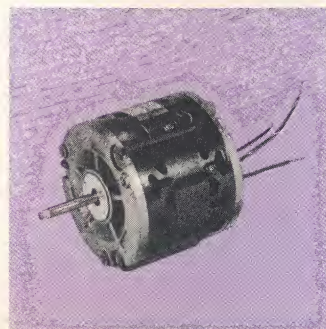
*the name for excellence*

Into every Ampex recorder goes the knowledge and technical capabilities of the entire Ampex Corporation. Here is a world famous firm, in which one out of every five employees is a highly skilled research scientist, engineer or technician... a corporation that supplies over 80% of the audio and video magnetic reproduction equipment used by the broadcast and entertainment industries... and a corporation whose magnetic recording devices are involved in every missile shot in the free world. It was Ampex who invented, and first introduced Videotape® to the television industry... revolutionizing programming procedures. Here is a corporation who supplies magnetic tape trans-

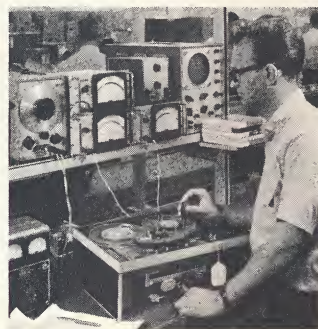
ports and recording instruments to a myriad of industries where dependability makes the difference between profit and loss.

Now, Ampex inventive-imagination, engineering skill and production capabilities have combined to produce the new 2000 Ampex tape recorders. They are the state of the art in home recording today.

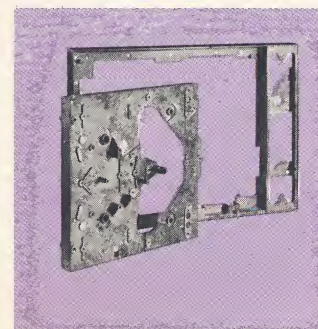
Illustrated here are but a few of the many design, engineering and manufacturing procedures observed in the production of each Ampex tape recorder. Every component... every assembly... every part... has been thoroughly tested and evaluated to insure you of many years of carefree dependable operation.



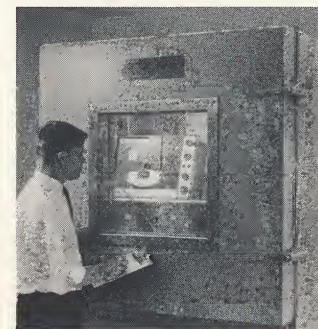
**CONSTANT-SPEED HYSTERESIS SYNCHRONOUS MOTOR.** The electric motor of the Ampex 2000 recorder provides the smooth uniform speed necessary for accurate tape transport. Even when line voltage varies, the motor continues operating at a constant speed. And, varying loads (within motor rating) will not alter its rpm's. Due to the design of this motor, it reverses easily and accelerates quickly to operating speed. You'll get the dependable performance demanded for high-fidelity recording.



**MODERN ELECTRONIC TESTING**—At every step of production, every Ampex tape recorder is thoroughly tested and evaluated. One out of three production people is a tester or an inspector. Typical of Ampex's testing procedures is the manner in which heads are evaluated... the 3 magnetic heads for your recorder are inspected and aligned to tolerances so precise they require special, Ampex-designed micro-optical measuring equipment... an optical comparator is used to align the height, azimuth and perpendicularity of the heads to the tape guides... head gap requirements are held to less than 10 millionths of an inch.



**RUGGED PRECISELY MACHINED DIE-CAST FRAMES.**—Wherever there is a stress, or a need for extra rigidity, the Ampex 2000 tape recorder has a die-cast aluminum alloy frame to meet the need. For strength and continued precision alignment there are 10 of these frames to which components are anchored. Particularly important is the Rigid Block die-casting on which all heads are mounted. Even if the recorder should be dropped, perfect alignment is assured. Should adjustment be necessary at any time it can be easily made. In addition, the motor, amplifier, tape transport system and every other critical component are mounted to these sturdy members. The Ampex 2070 weighs 39 lbs. with over 30% of the weight directly related to strength. This strength is one of the reasons the Ampex retains its value year in and year out... it is part of the reason why Ampex recorders consistently bring high prices at trade-in.



**ABUSE AND USE TESTING**—Here, in this environmental chamber, Ampex subjects recorders and individual parts to virtually every climatic change encountered in normal usage. Actual recorders have been exposed to temperatures of minus 40° f, then heated to 80° f to simulate removing the recorder from your car in cold weather and taking it inside your home. Parts have been subjected to even lower temperatures and higher extremes to test their reliability and endurance.

In addition, Ampex quality control is continually live testing all working parts. The automatic reverse feature has been put through 300,000 cycles without failure. Play levers and fast forward levers have been put through over 15,000 cycles without visible wear. Other test equipment is constantly monitoring the quality of electric and mechanical parts.



# AMPEX MODERN, FRESH STYLING



## MODEL 2050

### —TAPE DECK FOR COMPONENT SYSTEMS

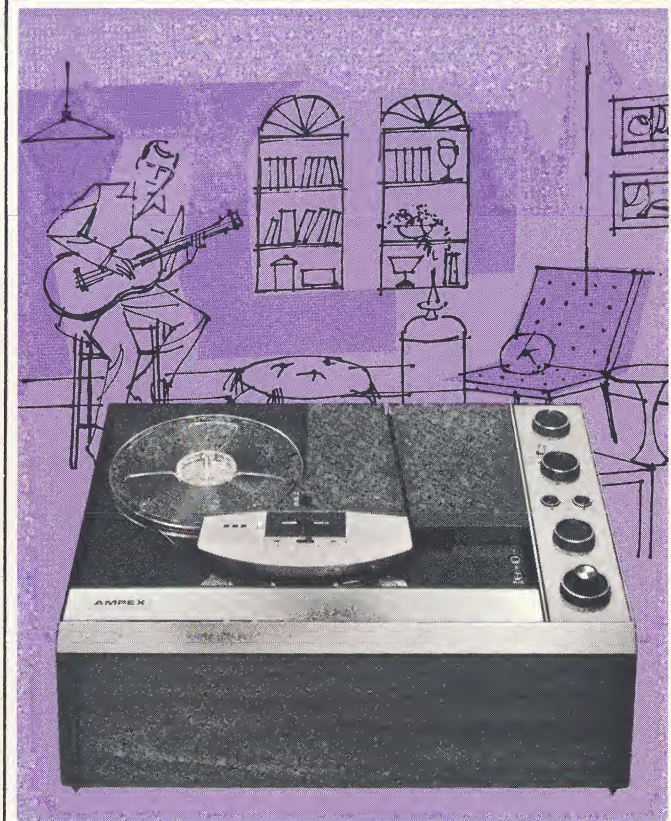
Model 2050 is designed for those who wish to obtain the convenient automatic features of the Model 2070, but already have a system containing power amplifiers and external speakers. The unit is basically a tape transport (identical to Model 2070) with pre-amplifiers. Framing the unit is a die-cast aluminum "picture frame" which overlaps mounting cut-outs . . . making for a neat, quick installation. May be installed vertically, horizontally or at any angle. Mounting frame provides ample ventilation for wall or furniture installation. **\$439.00\***



## MODEL 2070

### —PORTABLE TAPE RECORDER

A completely self-contained high fidelity tape recorder-player. Ideal for "on location" recording and for people on-the-go. Although portable, it is styled to enhance the decor of any environment. Components include, pre-amplifiers, power amplifiers and built-in monitoring speakers. The entire unit is encased in a handsome, black vinyl-clad reinforced wood cabinet case. Carrying handle well is ported for ample ventilation. Plays vertically, horizontally or at any angle. Also provided is an attractive gray vinyl-clad dust cover and one Ampex model 2001, high impedance microphone. **\$499.00\***



## MODEL 2080

### —FURNITURE MODEL TAPE DECK

*Identical to Model 2050 tape deck in operation and electronics.*

Unit comes encased in an attractive, oiled walnut cabinet suitable for display in a living room, den, or family room. Ideal for table top or shelf use, as it will play vertically or horizontally. All connections to external amplifiers, speakers, etc, made from the back side of the unit. There is no need for cords to show. When used with 2000 series speakers (plus external amplifiers), their design similarity produces an extremely attractive stereo system. Comes complete with beige vinyl-clad dust cover. **\$469.00\***

Each Model records 4-track stereophonic • 4-track monophonic. Each model plays 4-track stereophonic • 4-track monophonic • half-track monophonic • full track monophonic. Reel capacity 7 inches.

\*Manufacturer's Suggested List Price



# AMPEX PERFORMANCE SPECIFICATIONS

**AMPEX**  
ALL INCLUSIVE ONE YEAR  
**WARRANTY**

		2070		2050/2080	
		Average Perform.	Guar. Min. Perform.	Average Perform.	Guar. Min. Perform.
Overall Record/Reproduce Frequency Response (Pre-Amplifier only)	7½ ips	±2 db 30 cps to 18 KC	±3 db 50 cps to 15 KC	±2 db 30 cps to 18 KC	±3 db 50 cps to 15 KC
	3¾ ips	±3 db 40 cps to 12 KC	±4 db 50 cps to 9 KC	±3 db 40 cps to 12 KC	±4 db 50 cps to 9 KC
	1⅞ ips	±3 db 40 cps to 6 KC	±4 db 50 cps to 5 KC	±3 db 40 cps to 6 KC	±4 db 50 cps to 5 KC
SIGNAL TO NOISE (from peak record level to broad band noise) (pre-amplifier only)	7½ ips	52 db	49 db	53 db	50 db
	3¾ ips	48 db	45 db	49 db	46 db
	1⅞ ips	43 db	40 db	44 db	41 db
TONE CONTROL RANGE		16 db			
Variable at 100 cps		-0 to +12			
Variable at 10 KC		-4 to +10			
POWER OUTPUT:					
Continuous rms per channel		8W	6W		
Peak Voice & Music power both channels combined		40W	32W		
FLUTTER: (Flutter & Wow comb. measured according to ASA stds.)	7½ ips	0.08%	0.12%	0.08%	0.12%
	3¾ ips	0.12%	0.15%	0.12%	0.15%
	1⅞ ips	0.2%	0.25%	0.2%	0.25%
SPEED ACCURACY	7½ ips	±0.3%	±1%	±0.3%	±1%
	3¾ ips	±0.7%	±2%	±0.7%	±2%
	1⅞ ips	±1.5%	±3%	±1.5%	±3%
FAST WIND TIMES (1200' of Tape)		115 sec.	130 sec.	115 sec.	130 sec.

**A WORD OF CAUTION**—The tape recorder industry today is in a horse-power race, and there is no standard procedure for obtaining and stating specifications. Therefore, if you wish to compare Ampex specifications with those of any other competitor, you must make sure that those specifications were obtained under similar conditions. Otherwise, no valid conclusions or comparisons can be obtained. Ampex is proud of the specifications of its tape recorders. Throughout the years, Ampex tape recorders have set the pace for the industry and commanded the biggest in trade in values. They will continue to do so.

*Specifications subject to change without notice.*

Although each Ampex 2000 series tape recorder is meticulously tested and evaluated before it leaves the factory, occasionally a unit may prove to be defective by the time it reaches the consumer's hands. Where this occurs, Ampex stands behind its equipment with a one year warranty covering everything, including: tubes, diodes, transistors, etc. . . . **Nothing is excluded.**

This means that any malfunction of the recorder (resulting from faulty workmanship or materials) occurring within the first year of ownership can be referred to an authorized Ampex dealer at absolutely no charge to the owner. This warranty is your assurance that Ampex proudly backs up its products and has faith in their ability to give you many years of enjoyment.

